

## Author index—1971

- Albert, Irwin, Checking the calculated average through subtraction, Nov., 499–500
- Ando, Masue, and Hitoshi Ikeda, Learning multiplication facts—more than a drill, Oct., 366–72
- Arnold, William R., Computation made interesting, May 347–50
- Ashlock, Robert B., Teaching the basic facts: three classes of activities, Oct., 359–65
- Barson, Alan, The mathematics laboratory for the elementary and middle schools, Dec., 565–67
- Bartel, Elaine V., Understanding through involvement, Feb., 91–93
- Becker, Stanley, Elevator numbers, Oct., 422–28
- Benner, Betsy, Remainder multiplying, Apr., 249, 267
- Beougher, Elton E., Blast-off mathematics, Apr., 215–21
- Biggs, Edith E., What's Your Position on the role of experience in the learning of mathematics? May, 278, 285–95
- Bohan, Harry, Paper folding and equivalent fractions—bridging a gap, Apr., 245–49
- Borgen, Jerome S., and John B. Wood, Yardstick number-line balance, Mar., 184–85
- Brong, Tedi, Fun with pegs and pegboards, Apr., 234–35
- Brousseau, André, Conceptual mathematical methodology for prospective elementary school teachers, Apr., 265–67
- Brown, Gerald W., What happened to elementary school arithmetic? Mar., 172–75
- Brumbaugh, Douglas K., Isolation of factors that influence the ability of young children to associate a solid with a representation of that solid, Jan., 49–52
- Brumfiel, Charles, A note on correctness and incorrectness, May, 320–21
- Byers, Joseph W., Lunch money—nuisance or opportunity? Jan., 57–58
- Clark, John R., Elementary school mathematics in the 1970's, Oct., 385–86
- Comber, Julia, and Geoffrey Matthews, Mathematics laboratories, Dec., 547–50
- Connelly, Ralph, and James Heddens, "Remainders" that shouldn't remain, Oct., 379–80
- Crowhurst, Norman H., Making a game of it—responsive teaching, Jan., 23–28
- Cruikshank, Douglas E., and Charles de Flandre, There always are more questions, Nov., 443–48
- de Flandre, Charles, and Douglas E. Cruikshank, There always are more questions, Nov., 443–48
- Dickoff, Steven S., Paper folding and cutting a set of tangram pieces, Apr., 250–52
- Di Spigno, Joseph, Division isn't that hard, Oct., 373–78
- Dubisch, Roy, The sieve of Eratosthenes, Apr., 236–37
- Duncan, Hilda F., Division by zero, Oct., 381–84
- Dunning, Barbara B., and Meredith D. Gall, A very legitimate pride, May, 339–45
- Einhorn, Erwin, Laboratory project—constructing a skyline, Jan., 56
- Ewbank, William A., The mathematics laboratory: what? why? when? how? Dec., 559–64
- Fernhoff, Robert, Making the most of your field trip, Mar., 186–89
- Foreman, Dale I., and William A. Mehrens, National assessment in mathematics, Mar., 137–43
- Forsythe, Allan L., and Daviette H. Stansbury, Bobby and a computer! Feb., 88–90
- Gall, Meredith D., and Barbara B.

- Dunning, A very legitimate pride, May, 339-45
- Giles, Donald, Graphing inequalities directly, Mar., 185-86
- Godsave, Bruce F., Three games, May, 327-29
- Gross, L. P., A limerick, Jan., 59
- Gross, Lawrence P., Scrambled mathematics, Feb., 70
- Grossman, Anne S., Mid-nineteenth century methods for the 1970s, Apr., 230-33
- Hamilton, E. W., Subtraction by the "dribble method," May, 346-47
- Harper, E. Harold, Letter to the editor, Feb., 114
- Hartung, Maurice L., What's *Your Position* on the role of experience in the learning of mathematics? May, 279-84
- Heddens, James, and Ralph Connelly, "Remainders" that shouldn't remain, Oct., 379-80
- Henney, Maribeth, Improving mathematics verbal problem-solving ability through reading instruction, Apr., 223-29
- Henry, Boyd, Do we need separate rules to compute in decimal notation? Jan., 40-42
- Henry, Boyd, Why can't Johnny cipher? Jan., 37-39
- Hervey, Margaret A., and Bonnie H. Litwiller, A graphical representation of multiples of the whole numbers, Jan., 47-48
- Hight, Donald W., One Teacher's Point of View, Mar., 135-36
- Hollands, Roy D., Mary and John, Mar., 176
- Ibe, Milagros D., Drawing 3-D figures from 2-D templates, Mar., 180-82
- Ibe, Milagros D., Mathematics and art from one shape, Mar., 183-84
- Ikeda, Hitoshi, and Masue Ando, Learning multiplication facts—more than a drill, Oct., 366-72
- Immerzeel, George, and Don Wiederanders, IDEAS, Jan., 30-36; Feb., 94-98; Mar., 164-70; Apr., 238-42; May, 310-16;
- Oct., 390-98; Nov., 480-88; Dec., 576-84
- Jacobson, Ruth S., Fun with fractions for special education, Oct., 417-21
- Jansson, Lars C., Judging mathematical statements in the classroom, Nov., 463-66
- Johnson, David R., If I could only make a decree, Mar., 147-49
- Junge, Charlotte W., editor, Things you can try, Jan., 53-59; Feb., 115-18; Mar., 180-91; Apr., 268-70; May., 346-50; Oct., 429-32; Nov., 496-500
- Kessler, Bernard M., Sue's secret mathematics: One child's view of finite differences, May, 297-300
- Kieren, Thomas E., and James H. Vance, Laboratory setting in mathematics, Dec., 585-89
- Klaver, Irene, and Terrell Trotter, Jr., Number patterns from digit sums, Feb., 100-03
- Knaupp, Jonathan E., and Kenneth J. Travers, The computer revolution needs YOU! Jan., 11-17
- Lay, L. Clark, An elementary theory of equations, Nov., 457-61
- Lazerick, Beth Ellen, The conversion game, Jan., 54-55
- Leesberg, Norbert H., Evaluation scale for a teaching aid in modern mathematics, Dec., 592-94
- Litwiller, Bonnie H., and Margaret A. Hervey, A graphical representation of multiples of the whole numbers, Jan., 47-48
- Lopate, Clifford, Clifford's check for long division, Feb., 118
- Maertens, Norbert, and Clarence Schminke, Teaching—for what? Nov., 449-56
- Massey, Tom E., Dominoes in the mathematics classroom, Jan., 53-54
- Matthews, Geoffrey, and Julia Comber, Mathematics laboratories, Dec., 547-50
- McMahon, William E., More than just a name, Dec., 594-95
- McMillan, Polly, Nostalgia, Nov., 469
- Mehrens, William A., and Dale I. Foreman, National assessment in mathe-

- matics, Mar., 137-43
- Milne, Esther, A number line without numerals, Mar., 189-91
- Moser, James M., Grouping of objects as a major idea at the primary level, May, 301-05
- Mueller, Francis J., editor, Forum on teacher preparation, Apr., 265-67; May, 399-45
- Myers, Donald E., A geometric interpretation of certain sums, Nov., 475-79
- Niman, John, A game introduction to the binary numeration system, Dec., 600-01
- Norman, Laurel, Kindergarten in the ARITHMETIC TEACHER; A decade of growth, Apr., 253-56
- O'Brien, Thomas C., and June V. Richard, Interviews to assess number knowledge, May, 322-26
- Osborne, Alan R., editorial, Lab Oratory and the generalization gap, Dec., 545-46
- Pagni, David L., The computer motivates improvement in computational skills, Feb., 109-12
- Price, H. Vernon, NCTM service and the ARITHMETIC TEACHER, Jan., 5-6
- Prielipp, Robert W., Teaching one of the differences between rational numbers and whole numbers, May, 317-20
- Reisman, Fredricka K., Children's errors in telling time and a recommended teaching sequence, Mar., 152-55
- Reys, Robert E., Considerations for teachers using manipulative materials, Dec., 551-58
- Richard, June V., and Thomas C. O'Brien, Interviews to assess number knowledge, May, 322-26
- Riedesel, C. Alan, A change in "focus," Feb., 113-14
- Riedesel, C. Alan, Research suggestions: Use of time in teaching elementary school mathematics, Mar., 177-79
- Riedesel, C. Alan, editor, Using research in teaching, Jan., 49-52; Feb., 113-14; Mar., 177-79; May, 332-38; Nov., 513-19; Dec., 585-89
- Rockwell, Charles H., Convention fallout,
- May, 306-08
- Rode, Joann, Make a whole—a game using simple fractions, Feb., 116-18
- Rosenberg, Howard, What's the area? Oct., 429-30
- Rothbart, Andrea, and Esther Steinberg, Some observations of children's reactions to computer-assisted instruction, Jan., 19-21
- Sanders, Walter J., Let's go one step farther in addition, Oct., 413-16
- Schloff, Charles E., 8 = turkey, Apr., 268-70
- Schminke, Clarence, and Norbert Maertens, Teaching—for what?, Nov., 449-56
- Schwartz, Herbert, "The Experts and the Simpleton"—a fable, May, 330-31.
- Silverman, Helene, Where are the children? Dec., 596-97
- Silvey, Linda, Divisibility a-go-go! Jan., 46
- Smart, James R., Mathematics education and the White House Conference on Children, Oct., 409-12
- Smith, Frank, Divisibility rules for the first fifteen primes, Feb., 85-87
- Smith, Lewis B., A discovery lesson in elementary mathematics, Feb., 73-76
- Sowder, Larry, Models for fractional numbers—a quiz for teachers, Jan., 44-46
- Sowell, David, David's Solution, Jan., 58-59
- Stansbury, Daviette H., and Allan L. Forsythe, Bobby and a computer! Feb., 88-90
- Steffe, Leslie P., Thinking about measurement, May, 332-38
- Steinberg, Esther, and Andrea Rothbart, Some observations of children's reactions to computer-assisted instruction, Jan., 19-21
- Steinberg, Zina, Will the set of children...? Feb., 105-08
- Steinen, Ramon F., Abstract (verb) versus abstract (adjective), Apr., 257-61
- Sullivan, John J., Confirming the Pythagorean theorem, Feb., 115-16
- Suydam, Marilyn N., What's the answer? Nov., 439-41
- Thompson, Mary Helen, Smile when you

- say area!, Oct., 430-32
- Travers, Kenneth J., and Jonathan E. Knaupp, The computer revolution needs YOU! Jan., 11-17
- Trotter, Terrel, Jr., and Irene Klaver, Number patterns from digit sums, Feb., 103-03
- Trueblood, Cecil R., A model for using diagnosis in individualizing mathematics instruction in the elementary school classroom, Nov., 505-12
- Tucker, Benny F., "Parallelograms": a simple answer to drill motivation and individualized instruction, Nov., 489-92
- Vance, James H., and Thomas E. Kieren, Laboratory setting in mathematics, Dec., 585-89
- Van Engen, Henry, The new formalism, Feb., 69-70
- Van Engen, Henry, The morning after, Apr., 213-14
- Vaughn, Ruth K., Investigation of line crossing in a circle, Mar., 157-60
- Walbesser, Henry H., An annotated bibliography of programmed instruction in mathematics, Dec., 568-75
- Warner, Elizabeth V., An approximation method of finding square roots, Mar., 155
- method of finding square roots, Mar., 155
- Watman, Michael X., One eagle is worth ten dollars, Mar., 145-46
- Weaver, J. Fred, Seductive shibboleths, Apr., 263-64
- Weaver, J. Fred, Some factors associated with pupils' performance levels on simple open addition and subtraction sentences, Nov., 513-19
- West, Tommie A., Diagnosing pupil errors: looking for patterns, Nov., 467-72
- Wiederanders, Don, and George Immerzeel, IDEAS, Jan., 30-36; Feb., 94-98; Mar., 164-70; Apr., 238-42; May, 310-16; Oct., 390-98; Nov., 480-88; Dec., 576-84
- Wills, Herbert, Dify, Oct., 402-08
- Witt, Sarah M., A snip of the scissors, Nov., 496-99
- Wolfers, Edward P., The original counting systems of Papua and New Guinea, Feb., 77-83
- Wood, John B., and Jerome S. Borgens, Yardstick number-line balance, Mar., 184-85
- Wren, F. Lynwood, It's not how new you make it, but how you make it new, Jan., 7-9

## Title index—1971

- AAAS Section on Mathematics, 603-04
- Abstract (verb) versus abstract (adjective), Ramon F. Steinen, Apr., 257-61
- NCTM Affiliated Group Officers, Mar., 194-205
- An annotated bibliography of programmed instruction in mathematics, Henry H. Walbesser, Dec., 568-75
- Annual financial report, Committee on Financial Policies, Jan., 60-62
- Another milestone, Oct., 356
- Answers to "Scrambled Mathematics," Lawrence P. Gross, Feb., 87
- An approximation method of finding square roots, Elizabeth V. Warner, Mar., 155
- Blast-off mathematics, Elton E. Beougher, Apr., 215-21
- Board Action on 1970 Delegate Assembly Resolutions, Feb., 119-23
- Bobby and a computer! Allan L. Forsythe and Daviette H. Stansbury, Feb., 88-90
- Books and materials, May, 296, cover 3; Oct., 387-401; Nov., 462; Dec., 595
- Books received, Jan., 17; Feb., 83; Mar., 149, 208; Apr., 229
- A change in "focus," C. Alan Riedesel, Feb., 113-14
- Checking the calculated average through subtraction, Irwin Albert, Nov., 499-500
- Children's errors in telling time and a

- recommended teaching sequence, Fredricka K. Reisman, Mar., 152-55
- Clifford's check for long division, Clifford Lopate, Feb., 118
- Committees and Representatives, 1970/71 —Supplemental List, Feb., 123
- Computation made interesting, William R. Arnold, May, 347-50
- The computer motivates improvement in computational skills, David L. Pagni, Feb., 109-12
- The computer revolution needs YOU! Kenneth J. Travers and Jonathan E. Knaupp, Jan., 11-17
- Conceptual mathematical methodology for prospective elementary school teachers, André Rousseau, Apr., 265-67
- A concern of all, Editorial Panel, Oct., 357
- Confirming the Pythagorean theorem, John J. Sullivan, Feb., 115-16
- Considerations for teachers using manipulative materials, Robert E. Reys, Dec., 551-58
- Convention fallout, Charles H. Rockwell, May, 306-08
- The conversion game, Beth Ellen Lazerick, Jan., 54-55
- David's Solution, David Sowell, Jan., 58-59
- Diagnosing pupil errors: looking for patterns, Tommie A. West, Nov., 467-72
- Diffy, Herbert Wills, Oct., 402-08
- A discovery lesson in elementary mathematics, Lewis B. Smith, Feb., 73-76
- Divisibility a-go-go! Linda Silvey, Jan., 46
- Divisibility rules for the first fifteen primes, Frank Smith, Feb., 85-87
- Division by zero, Hilda F. Duncan, Oct., 381-84
- Division isn't that hard, Joseph Di Spigno, Oct., 373-78
- Dominoes in the mathematics classroom, Tom E. Massey, Jan., 53-54
- Do we need separate rules to compute in decimal notation? Boyd Henry, Jan., 40-42
- Drawing 3-D figures from 2-D templates, Milagros D. Ibe, Mar., 180-82
- 8 = turkey, Charles E. Schloff, Apr., 268-70
- Elementary school mathematics in the 1970's, John R. Clark, Oct., 385-86
- An elementary theory of equations, L. Clark Lay, Nov., 457-61
- Elevator numbers, Stanley Becker, Oct., 422-28
- Experience and Mathematical Learning, The Editorial Panel, May, 277
- "The Experts and the Simpleton"—a fable, Herbert Schwartz, May, 330-31
- Evaluation scale for a teaching aid in modern mathematics, Norbert H. Leeserberg, Dec., 592-94
- Forum on teacher preparation, Francis J. Mueller, editor, Apr., 265-67; May, 339-45
- Fun with fractions for special education, Ruth S. Jacobson, Oct., 417-21
- Fun with pegs and pegboards, Tedi Brong, Apr., 234-35
- A game introduction to the binary numeration system, John Niman, Dec., 600-601
- A geometric interpretation of certain sums, Donald E. Myers, Nov., 475-79
- A graphical representation of multiples of the whole numbers, Margaret A. Hervey and Bonnie H. Litwiller, Jan., 47-48
- Graphing inequalities directly, Donald Giles, Mar., 185-86
- Grouping of objects as a major idea at the primary level, James M. Moser, May, 301-05
- IDEAS, George Immerzeel and Don Wiederanders, Jan., 30-36; Feb., 94-98; Mar., 164-70; Apr., 238-42; May, 310-16; Oct., 390-98; Nov., 480-88; Dec., 576-84
- If I could only make a decree, David R. Johnson, Mar., 147-49
- Improving mathematics verbal problem-solving ability through reading instruction, Maribeth Henney, Apr., 223-29
- Interviews to assess number knowledge, Thomas C. O'Brien and June V. Richardson, May, 322-26

- Investigation of line crossing in a circle, Ruth K. Vaughn, Mar., 157-60
- Isolation of factors that influence the ability of young children to associate a solid with a representation of that solid, Douglas K. Brumbaugh, Jan., 49-52
- It's not how new you make it, but how you make it new, F. Lynwood Wren, Jan., 7-9
- Judging mathematical statements in the classroom, Lars C. Jansson, Nov., 463-66
- Kindergarten in the *ARITHMETIC TEACHER*: A decade of growth, Laurel Norman, Apr., 253-56
- Laboratory project—constructing a skyline, Erwin Einhorn, Jan., 56
- Laboratory setting in mathematics, James H. Vance and Thomas E. Kieren, Dec., 585-89
- Lab Oratory and the generalization gap, editorial by Alan R. Osborne, Dec., 545-46
- Learning multiplication facts—more than a drill, Masue Ando and Hitoshi Ikeda, Oct., 366-72
- Let's go one step farther in addition, Walter J. Sanders, Oct., 413-16
- A limerick, L. P. Gross, Jan., 59
- Looking for the research listing? Oct., 358
- Lunch money—nuisance or opportunity? Joseph W. Byers, Jan., 57-58
- Make a whole—a game using simple fractions, Joann Rode, Feb., 116-18
- Making a game of it—responsive teaching, Norman H. Crowhurst, Jan., 23-28
- Making the most of your field trip, Robert Fernhoff, Mar., 186-89
- Mary and John, Roy D. Hollands, Mar., 176
- Mathematical offprint service, Feb., 72
- Mathematics and art from one shape, Milagros D. Ibe, Mar., 183-84
- Mathematics education and the White House Conference on Children, James R. Smart, Oct., 409-12
- Mathematics laboratories, Geoffrey Matthews and Julia Comber, Dec., 547-50
- The mathematics laboratory for the elementary and middle schools, Alan Barson, Dec., 565-67
- The mathematics laboratory: what? why? when? how? William A. Ewbank, Dec., 559-64
- Memberships and Subscriptions, Dec., 602
- Mid-nineteenth century methods for the 1970s, Anne S. Grossman, Apr., 230-33
- Minutes of the Annual Business Meeting, Nov., 530-31
- A model for using diagnosis in individualizing mathematics instruction in the elementary school classroom, Cecil R. Trueblood, Nov., 505-12
- Models for fractional numbers—a quiz for teachers, Larry Sowder, Jan., 44-46
- More projects on individualizing instruction, Nov., 473-74
- More than just a name, William E. McMahon, Dec., 594-95
- The morning after, Henry Van Engen, Apr., 213-14
- National assessment in mathematics, Dale I. Foreman and William A. Mehrens, Mar., 137-43
- NCTM service and the *ARITHMETIC TEACHER*, H. Vernon Price, Jan., 5-6
- The new formalism, Henry Van Engen, Feb., 69-70
- 1972 Election, Feb., 124
- Nominations for the 1972 Election, Nov., 536-37
- Nostalgia, Polly McMillan, Nov., 469
- A note on correctness and incorrectness, Charles Brumfiel, May, 320-21
- A number line without numerals, Esther Milne, Mar., 189-91
- Number patterns from digit sums, Terrel Trotter, Jr. and Irene Klaver, Feb., 100-03
- Officers, Directors, Committees, Projects, and Representatives (1971-72), Nov., 531-37
- One eagle is worth ten dollars, Michael X. Watman, Mar., 145-46
- One point of view, H. Vernon Price, Jan., 5-6
- One point of view, Henry Van Engen, Feb.,

- 69-70; Apr., 213-14
- One point of view, Donald W. Hight, Mar., 135-36
- One point of view, The Editorial Panel, May, 277; Oct., 357
- One point of view, Marilyn N. Suydam, Nov., 439-41
- One point of view, Alan R. Osborn, Dec., 545-46
- One Teacher's Point of View, Donald W. Hight, Mar., 135-36
- The original counting systems of Papua and New Guinea, Edward P. Wolfers, Feb., 77-83
- Paper folding and cutting a set of tangram pieces, Steven S. Dickoff, Apr., 250-52
- Paper folding and equivalent fractions—bridging a gap, Harry Bohan, Apr., 245-49
- "Parallelograms": a simple answer to drill motivation and individualized instruction, Benny F. Tucker, Nov., 489-92
- President's Report: The State of the Council, Nov., 525-27
- Projects on individualizing instruction, Mar., 161-63
- Registrations at NCTM Conventions, Dec., 602-03
- Remainder multiplying, Betsy Benner, Apr., 249, 267
- "Remainders" that shouldn't remain, Ralph Connelly and James Heddens, Oct., 379-80
- Report of the Executive Secretary, Nov., 527-30
- Research suggestions: Use of time in teaching elementary school mathematics, C. Alan Riedesel, Mar., 177-79
- Scrambled mathematics, Lawrence P. Gross, Feb., 70
- Seductive shibboleths, J. Fred Weaver, Apr., 263-64
- The sieve of Eratosthenes, Roy Dubisch, Apr., 236-37
- Smile when you say area! Mary Helen Thompson, Oct., 430-32
- A snip of the scissors, Sarah M. Witt, Nov., 496-99
- Some factors associated with pupils' per-
- formance levels on simple open addition and subtraction sentences, J. Fred Weaver, Nov., 513-19
- Some observations of children's reactions to computer-assisted instruction, Andrea Rothbart and Esther Steinberg, Jan., 19-21
- Subtraction by the "dribble method," E. W. Hamilton, May, 346-47
- Sue's secret mathematics: One child's view of finite differences, Bernard M. Kessler, May, 297-300
- Teaching—for what? Norbert Maertens and Clarence Schminke, Nov., 449-56
- Teaching one of the differences between rational numbers and whole numbers, Robert W. Priellip, May, 317-20
- Teaching the basic facts: three classes of activities, Robert B. Ashlock, Oct., 359-65
- Thanks from the Editorial Panel, Feb., 71-72
- There always are more questions, Douglas E. Cruikshank and Charles de Flandre, Nov., 443-48
- Things you can try, Charlotte W. Junge, editor, Jan., 53-59; Feb., 115-18; Mar., 180-91; Apr., 268-70; May, 346-50; Oct., 429-32; Nov., 496-500
- Thinking about measurement, Leslie P. Steffe, May, 332-38
- Three games, Bruce F. Godsave, May, 327-29
- Understanding through involvement, Elaine V. Bartel, Feb., 91-93
- Using research in teaching, C. Alan Riedesel, editor, Jan., 49-52; Feb., 113-14; Mar., 177-79; May, 332-38; Nov., 513-19; Dec., 585-89
- A very legitimate pride, Barbara B. Dunning and Meredith D. Gall, May, 339-45
- What happened to elementary school arithmetic? Gerald W. Brown, Mar., 172-75
- What's the answer? Marilyn N. Suydam, Nov., 439-41
- What's the area? Howard Rosenberg, Oct.,

429-30

What's *Your Position* on the role of experience in the learning of mathematics?  
Edith E. Biggs, May, 278, 285-95

What's *Your Position* on the role of experience in the learning of mathematics?  
Maurice L. Hartung, May, 279-84

Where are the children? Helene Silverman,  
Dec., 596-97

Why can't Johnny cipher? Boyd Henry,  
Jan., 37-39

Will the set of children . . . ? Zina Steinberg, Feb., 105-08

Yardstick number-line balance, Jerome S. Borgen and John B. Wood, Mar., 184-85

Your Professional Dates, Jan., 63-64; Feb., 124-26; Mar., 206-08; Apr., 271-72; May, 352-cover 3; Oct., 433; Nov., 537-38; Dec., 604-05

## Subject index—1971

### Addition and Subtraction

Difffy, 402-08

Do we need separate rules to compute in decimal notation? 40-42

Elevator numbers, 422-28

A geometric interpretation of certain sums, 475-78

Let's go one step farther in addition, 413-16

Some factors associated with pupils' performance levels on simple open addition and subtraction sentences, 513-19

Subtraction by the "dribble method," 346-47

Yardstick number-line balance, 184-85

### Affiliated Groups. *See* NCTM

### Aims

Your Professional Dates, 433

### Algebra

An elementary theory of equations, 457-62

### Area. *See also* Measurement

Smile when you say area! 430-32

What's the area? 429-30

### Bibliography

An annotated bibliography of programmed instruction in mathematics, 568-75

Kindergarten in the ARITHMETIC TEACHER: A decade of growth, 253-56

### Books and Materials

Books and materials, 387-401, 462, 595

Considerations for teachers using manipulative materials, 551-58

Evaluation scale for a teaching aid in modern mathematics, 592-94

More projects on individualizing instruction, 473-74

Projects on individualizing instruction, 161-63

### Computation

The computer revolution needs YOU! 11-17

Do we need separate rules to compute in decimal notation? 40-42

Understanding through involvement, 91-93

The computer motivates improvement in computational skills, 109-12

An approximation method of finding square roots, 155

Checking the calculated average through subtraction, 499-500

Sue's secret mathematics: One child's view of finite differences, 297-300

Subtraction by the "dribble method," 346-47

Teaching the basic facts: three classes of activities, 359-65

Computation made interesting, 347-50

**Computer Assisted Instruction.** *See* Teaching Methods

Some observations of children's reactions to computer-assisted instruction, 19-21

**Computers**

The computer revolution needs YOU! 11-17

Bobby and a computer! 88-90

The computer motivates improvement in computational skills, 109-12

**Counting**

The original counting systems of Papua and New Guinea, 77-83

A number line without numerals, 189-91

Grouping of objects as a major idea at the primary level, 301-05

**Curriculum**

Elementary school mathematics in the 1970's, 385-86

It's not how new you make it, but how you make it new, 7-9

There always are more questions, 443-47

What happened to elementary school arithmetic? 172-75

**Decimals.** *See* Fractions

**Discovery.** *See also* Teaching Methods

Experience and Mathematical Learning, 277

Making a game of it—responsive teaching, 23-28

Investigation of line crossing in a circle, 157-60

What's Your Position on the role of experience in the learning of mathematics? 278-95

**Division; Divisibility**

Division by zero, 381-84

Do we need separate rules to compute in decimal notation? 40-42

David's Solution, 58-59

Divisibility rules for the first fifteen primes, 85-87

Division isn't that hard, 373-78

Clifford's check for long division, 118

Remainder multiplying, 249, 267

"Remainders" that shouldn't remain, 379-80

**Editorial Comments**

A change in "focus," 113-14

A concern of all, 357

Another milestone, 356

Experience and Mathematical Learning, 277

Lab Oratory and the generalization gap, 545-46

The morning after, 213-14

NCTM service and the ARITHMETIC TEACHER, 5-6

The new formalism, 69-70

Thanks from the Editorial Panel, 71-72

One Teacher's Point of View, 135-36

**Equations.** *See* Algebra

**Experiment.** *See* Research

**Fractions; Fractional Numbers**

David's Solution, 58-59

Dominoes in the mathematics classroom, 53-54

Do we need separate rules to compute in decimal notation? 40-42

Fun with fractions for special education, 417-21

Make a whole—a game using simple fractions, 116-18

Models for fractional numbers—a quiz for teachers, 44-46

Paper folding and equivalent fractions—bridging a gap, 245-49

Teaching one of the differences between rational numbers and whole numbers, 317-20

The conversion game, 54-55

"The Experts and the Simpleton"—a fable, 330-31

**Function.** *See* Algebra

**Games.** *See also* Recreational Mathematics

Diffy, 402-08

Dominoes in the mathematics classroom, 53-54

Elevator numbers, 422-28

- A game introduction to the binary numeration system, 600-01  
 Make a whole—a game using simple fractions, 116-18  
 "Parallelograms": a simple answer to drill motivation and individualized instruction, 489-93  
 Scrambled mathematics, 70  
 Smile when you say area! 429-32  
 The conversion game, 54-55  
 Three games, 327-29

### **Geometry**

- A discovery lesson in elementary mathematics, 73-76  
 A geometric interpretation of certain sums, 475-78  
 A snip of the scissors, 496-99  
 Confirming the Pythagorean theorem, 115-16  
 Drawing 3-D figures from 2-D templates, 180-82  
 Mathematics and art from one shape, 183-84  
 Paper folding and cutting a set of tangram pieces, 250-52

### **Graphs and Graphing**

- A graphical representation of multiples of the whole numbers, 47-48  
 Lunch money—nuisance or opportunity? 57-58  
 A discovery lesson in elementary mathematics, 73-76  
 Graphing inequalities directly, 185-86  
 Three games, 327-29

### **History of Mathematics and Mathematics Education**

- One eagle is worth ten dollars, 145-46  
 Mid-nineteenth century methods for the 1970s, 230-33

### **Humor, Drama, Verse**

- Divisibility a-go-go! 46  
 A limerick, 59  
 Nostalgia, 469

### **Individual Differences**

- Mathematics education and the White House Conference on Children, 409-12

### **Individualized Instruction. See also Teaching Methods**

- An annotated bibliography of programmed instruction in mathematics, 568-75  
 More projects on individualizing instruction, 473-74  
 Projects on individualizing instruction, 161-63

### **Laboratory Method; Laboratories**

- Blast-off mathematics, 215-21  
 Considerations for teachers using manipulative materials, 551-58  
 Convention fallout, 306-08  
 Evaluation scale for a teaching aid in modern mathematics, 592-94  
 Laboratory project—constructing a skyline, 56  
 Lab Oratory and the generalization gap, 545-46  
 Laboratory settings in mathematics: what does research say to the teacher? 585-89  
 Lunch money—nuisance or opportunity? 57-58  
 Mathematics laboratories, 547-50  
 The mathematics laboratory for the elementary and middle schools, 565-67  
 The mathematics laboratory: what? why? when? how? 559-64  
 Where are the children? 596-97

### **Learning Process. See also Teaching Methods**

- Experience and Mathematical Learning, 277  
 Interviews to assess number knowledge, 322-26  
 Teaching—for what? 449-56  
 Teaching the basic facts: three classes of activities, 359-65  
 What's Your Position on the role of experience in the learning of mathematics? 278-95  
 Thinking about measurement, 332-38

### **Learning Disabilities**

- Why can't Johnny cipher? 37-39

### **Low Achievers. See Individual Differences**

## **Measurement**

Laboratory project—constructing a skyline, 56  
Thinking about measurement, 332–38

## **Multiplication**

Do we need separate rules to compute in decimal notation? 40–42  
 $8 = \text{turkey}$ , 268–70  
Learning multiplication facts—more than a drill, 366–72

## **NCTM**

### *Committee Reports*

Annual financial report, 60–62  
Auditor's report, 61–62  
Board Action on 1970 Delegate Assembly Resolutions, 119–23  
1972 Election, 124  
Memberships and Subscriptions, 602  
Nominations for the 1972 Election, 536–37  
Registrations at NCTM conventions, 602–03

### *Executive Secretary's Report*

Report of the Executive Secretary, 527–30

### *Meetings*

Your Professional Dates, 63–64; 124–26; 206–08; 271–72; 352—Cover 3; 433; 537–38; 604–05  
AAAS Section on Mathematics, 603–04

### *Minutes*

Minutes of the Annual Business Meeting, 530–31

### *Officers, committees, projects, and representatives*

Officers, Directors, Committees, Projects, and Representatives (1971–72), 531–36

Committees and Representatives, 1970/71—Supplemental List, 123

NCTM Affiliated Group Officers, 194–205

### *President's Messages*

President's Report: The State of the Council, 525–27

NCTM service and the *ARITHMETIC TEACHER*, 5–6

## **Notations and Terminology**

A game introduction to the binary numeration system, 600–01

## **Numbers; Number Systems**

A graphical representation of multiples of the whole numbers, 47–48  
The sieve of Eratosthenes, 236–37  
Abstract (verb) versus abstract (adjective), 257–61  
Teaching one of the differences between rational numbers and whole numbers, 317–20

## **Organizations**

Mathematical offprint service, 72  
Mathematics education and the White House Conference on Children, 409–12

## **Patterns**

Number patterns from digit sums, 100–03

### *Pedagogy. See Teaching Methods*

## **Psychology**

Thinking about measurement, 332–38

### *Recreational Mathematics. See also Games*

Mathematics and art from one shape, 183–84

## **Research**

Isolation of factors that influence the ability of young children to associate a solid with a representation of that solid, 49–52

Laboratory settings in mathematics; what does research say to the teacher? 585–89

Looking for the research listing? 358  
National assessment in mathematics, 137–43

Paper folding and equivalent fractions—bridging a gap, 245–49

Research suggestions: Use of time in teaching elementary school mathematics, 177–79

Some factors associated with pupil's performance levels on simple open addition and subtraction sentences, 513–19

- Sets**
- Understanding through involvement, 91–93
  - Will the set of children . . . ? 105–08
  - Three games, 327–29
- Subtraction.** *See* Addition and Subtraction
- Teacher Preparation**
- Conceptual mathematical methodology for prospective elementary school teachers, 265–67
  - A very legitimate pride, 339–45
- Teaching Methods**
- Abstract (verb) versus abstract (adjective), 257–61
  - Bobby and a computer! 88–90
  - Children's errors in telling time and a recommended teaching sequence, 152–55
  - Considerations for teachers using manipulative materials, 551–58
  - Convention fallout, 306–08
  - Diagnosing pupil errors: looking for patterns, 467–69
  - 8 = turkey, 268–70
  - Experience and Mathematical Learning, 277
  - "The Experts and the Simpleton"—a fable, 330–31
  - Fun with pegs and pegboards, 234–35
  - Grouping of objects as a major idea at the primary level, 301–05
  - If I could only make a decree, 147–49
  - Improving mathematics verbal problem-solving ability through reading instruction, 223–29
  - Interviews to assess number knowledge, 322–26
  - Investigation of line crossing in a circle, 157–60
  - It's not how new you make it, but how you make it new, 7–9
  - Judging mathematical statements in the classroom, 463–66
  - Laboratory settings in mathematics: what does research say to the teacher? 585–89
  - Making a game of it—responsive teaching, 23–28
  - Making the most of your field trip, 186–89
  - Mary and John, 176
  - Mathematics laboratories, 547–50
  - The mathematics laboratory: what? why? when? how? 559–64
  - Mid-nineteenth century methods for the 1970's, 230–33
  - A model for using diagnosis in individualizing mathematics instruction in the elementary school classroom, 505–11
  - Models for fractional numbers—a quiz for teachers, 44–46
  - More than just a name, 594–95
  - The new formalism, 69–70
  - A note on correctness and incorrectness, 320–21
  - A number line without numerals, 189–91
  - Paper folding and equivalent fractions—bridging a gap, 245–49
  - Projects on individualizing instruction, 161–63
  - Research suggestions: Use of time in teaching elementary school mathematics, 177–79
  - What's *Your Position* on the role of experience in the learning of mathematics? 278–95
  - Seductive shibboleths, 263–64
  - The sieve of Erathosthenes, 236–37
  - Some observations of children's reactions to computer-assisted instruction, 19–21
  - Teaching—for what? 449–56
  - Teaching the basic facts: three classes of activities, 359–65
  - Thinking about measurement, 332–38
  - Understanding through involvement, 91–93
  - A very legitimate pride, 339–45
  - What happened to elementary school arithmetic? 172–75
  - What's the answer? 439–42
  - Where are the children? 596–97
  - Why can't Johnny cipher? 37–39
- Textbooks.** *See* Books and Materials
- Volume.** *See* Measurement

UM